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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,777	01/27/2004	Craig William Fellenstein	AUS920030962US1	2482

45327   7590   01/08/2008
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EXAMINER
AHLUWALIA, NAVNEET K

ART UNIT	PAPER NUMBER
2166	

MAIL DATE	DELIVERY MODE
01/08/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)	
Office Action Summary	10/765,777	FELLENSTEIN ET AL.	
	Examiner	Art Unit	
	Navneet K. Ahluwalia	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _09 October 2007_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-8,10,11 and 13_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-8,10,11 and 13_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   In view of the appeal brief filed on 01/31/2007, PROSECUTION IS HEREBY

REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the

following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply

under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed

by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and

appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth

in 37 CFR 41.20 have been increased since they were previously paid, then appellant

must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by

signing below:

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claims 11 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4.   The "computer program" in line 3 has a lack of antecedent therefore it is not clear if it is a part of program product.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6.   Claims 11 and 13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

7.   Claims recites "a computer program product for file defragmentation of at least one storage medium at least coupled to a computer system" which is intended use but in the comprising components only computer codes are being claimed and therefore the claim is rendered as software per se and also lacks hardware.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 1 – 8, 10, 11 and 13 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Jochemsen et al. ('Jochemsen' herein after) (US 6,757,804 B2)

further in view of Barry L. Carlson ('Carlson' herein after) (US 2003/0101383 A1).

With respect to claim 1,

        Jochemsen discloses an apparatus for file defragmentation of at least one

storage medium, comprising:

- a computer system at least coupled to the at least one storage medium

    (column 1 lines 11 - 25, Jochemsen);

- a tracker, wherein the tracker is at least configured to maintain a record of at

    least locations of a plurality of file fragments on at least one storage medium

    (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen); and

- an agent, wherein the agent is at least: configured to operate while the

    computer system is at least idle (column 2 lines 58 – 67, Jochemsen);

    configured to defragment the plurality of file fragments (column 2 lines 1 – 10,

    Jochemsen); and configured to delete the record of at least locations of the

plurality of file fragments (column 2 lines 58 – 67 and column 3 lines 23 – 45,

Jochemsen).

Jochemsen does not explicitly disclose as it is silent about the system operating

when idle.

Carlson however teaches the system working at all times and explicitly discloses

about the idle system (paragraphs 26 – 27, Carlson).

It would have been obvious to one of ordinary skill in the art of data processing at

the time of the present invention to combine the teachings of cited references because

both the inventions are directed in the same field of study namely, maintenance of

storage and memory and fragmentation. The explicit disclosure in Carlson of the

fragmentation occurring even when system is idle enhances the productivity and

execution of the system (paragraphs 26 – 27, Carlson).

With respect to claim 2,

Jochemsen discloses the apparatus of claim 1, wherein the agent further

comprises at least having the ability to modify attributes of defragmentation (column 3

lines 37 – 46, Jochemsen).

With respect to claim 3,

Jochemsen discloses the apparatus of claim 2, wherein the attributes are

selected from the group consisting of file type, frequency of access, typical access

duration, interval between accesses, file/application association, file size, read

attributes, update attributes, and time of day of typical access (column 4 lines 22 – 226 and 42 – 47, Jochemsen).

With respect to claim 4,

Jochemsen discloses the apparatus of claim 1 further comprising:

- a memory, wherein the memory is at least configured to store locations of a plurality of file fragments (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);

- a system monitor, wherein the system monitor at least determines if file fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage medium (column 2 lines 58 – 67, Jochemsen); and

- an accounting means, wherein the accounting means is at least configured to store locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred (column 3 lines 23 – 45, Jochemsen).

With respect to claim 5,

Jochemsen discloses an apparatus for file defragmentation of at least one storage medium at least coupled to a computer system, comprising:

- a memory, wherein the memory is at least configured to store locations of a plurality of file fragments (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);

- an idle monitor, wherein the idle monitor is at least configured to enable

  defragmentation while the computer system is at least idle (column 2 lines 58

  – 67, Jochemsen);

- a defragmenter, wherein the defragmenter is at least configured to

  defragment the plurality of file fragments (column 1 lines 49 – 53,

  Jochemsen); and

- an update monitor, wherein the update monitor is at least configured to delete

  a record in the memory of at least locations of the plurality of file fragments

  that at least been defragmented (column 3 lines 23 – 45, Jochemsen).

Jochemsen does not explicitly disclose as it is silent about the system operating

when idle.

Carlson however teaches the system working at all times and explicitly discloses

about the idle system (paragraphs 26 – 27, Carlson).

It would have been obvious to one of ordinary skill in the art of data processing at

the time of the present invention to combine the teachings of cited references because

both the inventions are directed in the same field of study namely, maintenance of

storage and memory and fragmentation. The explicit disclosure in Carlson of the

fragmentation occurring even when system is idle enhances the productivity and

execution of the system (paragraphs 26 – 27, Carlson).

With respect to claim 6,

Jochemsen discloses the apparatus of claim 5, wherein the agent further comprises at least having the ability to modify attributes of defragmentation (column 3 lines 37 – 46, Jochemsen).

With respect to claim 7,

Jochemsen discloses the apparatus of claim 6, wherein the attributes are selected from the group consisting of file type, frequency of access, typical access duration, interval between accesses, file/application association, file size, read attributes, update attributes, and time of day of typical access (column 4 lines 22 – 226 and 42 – 47, Jochemsen).

With respect to claim 8,

Jochemsen discloses a method of for file defragmentation of at least one storage medium coupled to a computer system, comprising:

- determining if fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage media (column 1 lines 49 – 58, Jochemsen); storing locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred in a storage medium (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);

- determining if the computer system is idle if the computer system is not idle,

  sleeping for an interval (column 1 lines 49 – 58, Jochemsen); if the computer

  system is idle, defragmenting a file (column 2 lines 58 – 67, Jochemsen);

- determining if defragmentation is complete if defragmentation is complete,

  deleting the location of the fragmented file clusters in the storage medium

  (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete,

  determining if defragmentation is stopped by activity (column 3 lines 22 – 34,

  Jochemsen); if defragmentation is stopped by activity, sleeping for an interval

  (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by

  activity, reporting an error (column 3 lines 23 – 45, Jochemsen).

Jochemsen does not explicitly disclose as it is silent about the system operating

when idle.

Carlson however teaches the system working at all times and explicitly discloses

about the idle system (paragraphs 26 – 27, Carlson).

It would have been obvious to one of ordinary skill in the art of data processing at

the time of the present invention to combine the teachings of cited references because

both the inventions are directed in the same field of study namely, maintenance of

storage and memory and fragmentation. The explicit disclosure in Carlson of the

fragmentation occurring even when system is idle enhances the productivity and

execution of the system (paragraphs 26 – 27, Carlson).

With respect to claim 10,

Jochemsen discloses a method of defragmenting at least one storage medium coupled to a computer system, comprising:

- determining if the computer system is idle if the computer system is not idle, sleeping for an interval (column 2 lines 1 – 10, Jochemsen); if the computer system is idle, defragmenting the file (column 2 lines 58 – 67, Jochemsen);

- determining if defragmentation is complete if defragmentation is complete, deleting a location of the fragmented file clusters in a storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete, determining if stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, sleeping for an interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by activity, reporting an error (column 3 lines 23 – 45, Jochemsen).

Jochemsen does not explicitly disclose as it is silent about the system operating when idle.

Carlson however teaches the system working at all times and explicitly discloses about the idle system (paragraphs 26 – 27, Carlson).

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both the inventions are directed in the same field of study namely, maintenance of storage and memory and fragmentation. The explicit disclosure in Carlson of the fragmentation occurring even when system is idle enhances the productivity and execution of the system (paragraphs 26 – 27, Carlson).

With respect to claim 11,

Jochemsen discloses a computer program product for file defragmentation of at least one storage medium at least coupled to a computer system, the computer program product having a medium embodied thereon, the computer program comprising:

- computer code for determining if fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage media (column 1 lines 49 – 58, Jochemsen); computer code for storing locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred in a storage medium (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);

- computer code for determining if the computer system is idle, if the computer system is not idle, computer code for sleeping for an interval (column 2 lines 1 – 10, Jochemsen); if the computer system is idle, computer code for defragmenting a file (column 2 lines 58 – 67, Jochemsen); computer code for determining if defragmentation is complete; if defragmentation is complete, computer code for deleting the location of the fragmented file clusters in the storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete, computer code for determining if defragmentation is stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, computer code for sleeping for an interval (column 2 lines 1 – 10,

Jochemsen); and if defragmentation is not stopped by activity, computer code

for reporting an error (column 3 lines 23 – 45, Jochemsen).

Jochemsen does not explicitly disclose as it is silent about the system operating

when idle.

Carlson however teaches the system working at all times and explicitly discloses

about the idle system (paragraphs 26 – 27, Carlson).

It would have been obvious to one of ordinary skill in the art of data processing at

the time of the present invention to combine the teachings of cited references because

both the inventions are directed in the same field of study namely, maintenance of

storage and memory and fragmentation. The explicit disclosure in Carlson of the

fragmentation occurring even when system is idle enhances the productivity and

execution of the system (paragraphs 26 – 27, Carlson).

With respect to claim 13,

Jochemsen discloses a computer program product for defragmenting at least one

storage medium coupled to a computer system, the computer program product having a

medium embodied thereon, the computer program comprising:

- computer code for determining if the computer system is idle, if the computer

    system is not idle, computer code for sleeping for an interval (column 1 lines

    49 – 58, Jochemsen); if the computer system is idle, computer code for

    defragmenting a file (column 2 lines 58 – 67, Jochemsen);

- computer code for determining if defragmentation is complete, if

defragmentation is complete, computer code for deleting a location of the

fragmented file clusters in a storage medium (column 1 lines 49 – 53,

Jochemsen); if defragmentation is not complete, computer code for

determining if stopped by activity (column 3 lines 22 – 34, Jochemsen); if

defragmentation is stopped by activity, computer code for sleeping for an

interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not

stopped by activity, computer code for reporting an error (column 3 lines 23 –

45, Jochemsen).

Jochemsen does not explicitly disclose as it is silent about the system operating

when idle.

Carlson however teaches the system working at all times and explicitly discloses

about the idle system (paragraphs 26 – 27, Carlson).

It would have been obvious to one of ordinary skill in the art of data processing at

the time of the present invention to combine the teachings of cited references because

both the inventions are directed in the same field of study namely, maintenance of

storage and memory and fragmentation. The explicit disclosure in Carlson of the

fragmentation occurring even when system is idle enhances the productivity and

execution of the system (paragraphs 26 – 27, Carlson).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navneet K. Ahluwalia whose telephone number is 571-272-5636.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam T. Hosain can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Navneet K. Ahluwalia
Examiner
Art Unit 2166

Dated: 12/27/2007

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER